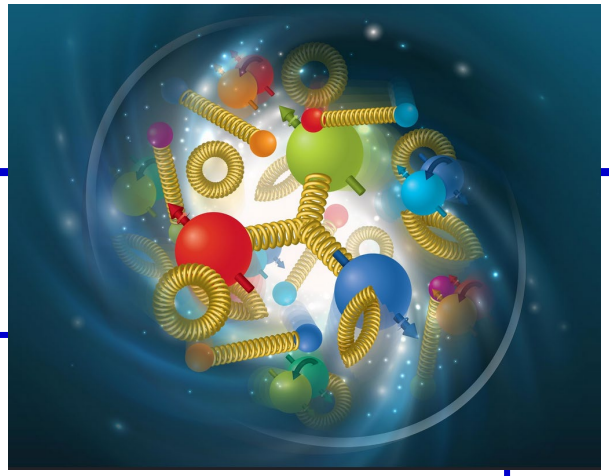


ePIC General Meeting

11/22/2022

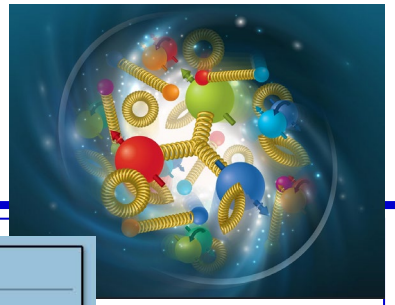
***Silvia Dalla Torre*, Tanja Horn, Or Hen , John Lajoie, Bernd Surrow**

CALENDAR OF THE ePIC MEETINGs

Some calendar modifications to minimize interference with holidays and preserve the Collaboration activity

- ***General meetings:***
  - **November 22nd, 2022 (Tuesday) morning (today)**
  - **December 8th, 2022 (Thursday) evening**
  - **December 20th, 2022 (Tuesday) morning**
  - **January 9-11, 2023 ePIC meeting in hybrid mode at JLab (next slide)**
- ***Convener meetings:***
  - **November 18, 2022 (Friday)**
  - **December 2, 2022 (Friday)**
  - **December 16, 2022 (Friday)**
  - **January 3, 2023 (Tuesday), *to be confirmed***

January 2023 ePIC MEETING



- Jan. 9-11 2023 at Jlab
  - Hybrid format
- Registration and travel information: https://www.jlab.org/conference/EPIC
- Indico Agenda: https://indico.bnl.gov/event/17621/

EPIC COLLABORATION

ePIC

ePIC EXPERIMENT

EPIC

Electron Proton-Ion Collider Experiment

ePIC Collaboration

Conference Date
January 09, 2023 to January 11, 2023

Conference Location
Jefferson Lab

The second meeting of the ePIC Collaboration will take place January 9-11th at the Thomas Jefferson National Accelerator Facility. The meeting will be held in a hybrid format to allow all members of the international collaboration to take part. The meeting is open to both current members of the ePIC collaboration as well as all interested parties.

This second meeting of the ePIC Collaboration comes at a time of major progress in the development of the technical design of the ePIC detector, the first major simulation campaign and deployment of the unified software stack, and the formation of the collaboration through a Collaboration Charter.

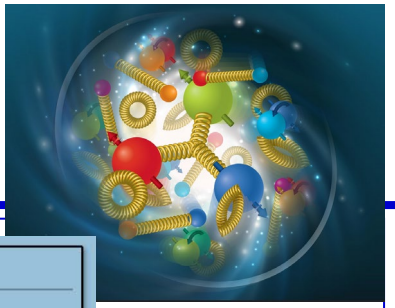
The agenda consists of plenary sessions held over two and a half days covering the status of the collaboration, a report from the EIC project, and status reports from the Detector and Physics Working Group members. There will be a meeting of the Collaboration Council on the first afternoon, and an opportunity to tour the laboratory facilities on the last day. The meeting will focus on planning to address the challenges in the coming year and the milestones that need to be met for the CD-2/3A review in late 2023.

Organizing Committee
Silvia Dalla Torre (Trieste)
Or Hen (MIT)
Tanja Horn (CUA)
John Lajoie (Iowa State)
Bernd Surrow (Temple)

The bulk of the agenda are the WG sessions, 1-h block per WG, *including*

- Overview (WG convener)
- Additional talks from WG contributors
- *Opportunity for members who have been working hard to get some public recognition!*
- We encourage conveners to nominate people accordingly, and to do so soon to maximize the possibility they can make travel plans to attend in-person
- Please, include some time for questions within the talks

January 2023 ePIC MEETING



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Electron Proton-Ion Collider Experiment

ePIC Collaboration

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PLEASE, REGISTER !

The bulk of the agenda are the WG sessions, 1-h block per WG, *including*

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Other events of interest for ePIC

Recent Past

Recent Events

- September 26 – EIC Advisory Board meeting
- October 12-13 – "Resource Review Board"-like kickoff meeting

  Status: 1st RRB meeting scheduled for April 3-4. Work ongoing to prepare and finalize a document to define RRB (David Dean, Haiyan Gao, Diego Bettoni)
- October 18-19 – 60% Magnet Review @ JLab

  Status: (1) We are working on a continuation of the detector solenoid magnet design contract towards a final 90% design with completion over the next 12 months (This is what is needed to initiate a vendor design-build contract).
  (2) The magnet team is working with a possible vendor on a plan for a trial sample for the envisioned conductor, defining the conductor parameters for this run, and a plan to then test the samples and improve the process if required. It looks promising to have the sample conductor run done this FY.
- October 19-21 – Detector Advisory Committee meeting

  Status: meetings of Patrizia, Thomas, Elke, Rolf to go over the various DAC R&D-specific recommendations. Largest issue is how to fit in a box (mainly due to that Si MAPS-ITS3 sensors moved to project R&D). As one mitigation we have discussed with LBNL what of eRD111 could be done as PED. Another mitigation is to ensure consistent (low) overhead for all BNL Divisions/Groups. We are nearing convergence now.

3

10/14/2022 J. Lajoie - ePIC Conveners Meeting 3

Slide from 11/15 SC meeting with the project.

RRB is an organization that will survive construction into the operations phase.

Magnet is well on the way to 90% design completion by CD-2/3A.

For those in the DWG's that have been asking about R&D funding – project working to meet requests, expect convergence soon.

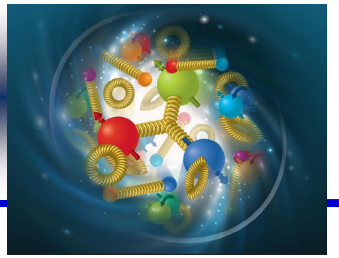
EIC-UG quarterly meeting on November 17th
- **ePIC talk by the SC, speaker: Bernd Surrow**

Other events of interest for ePIC

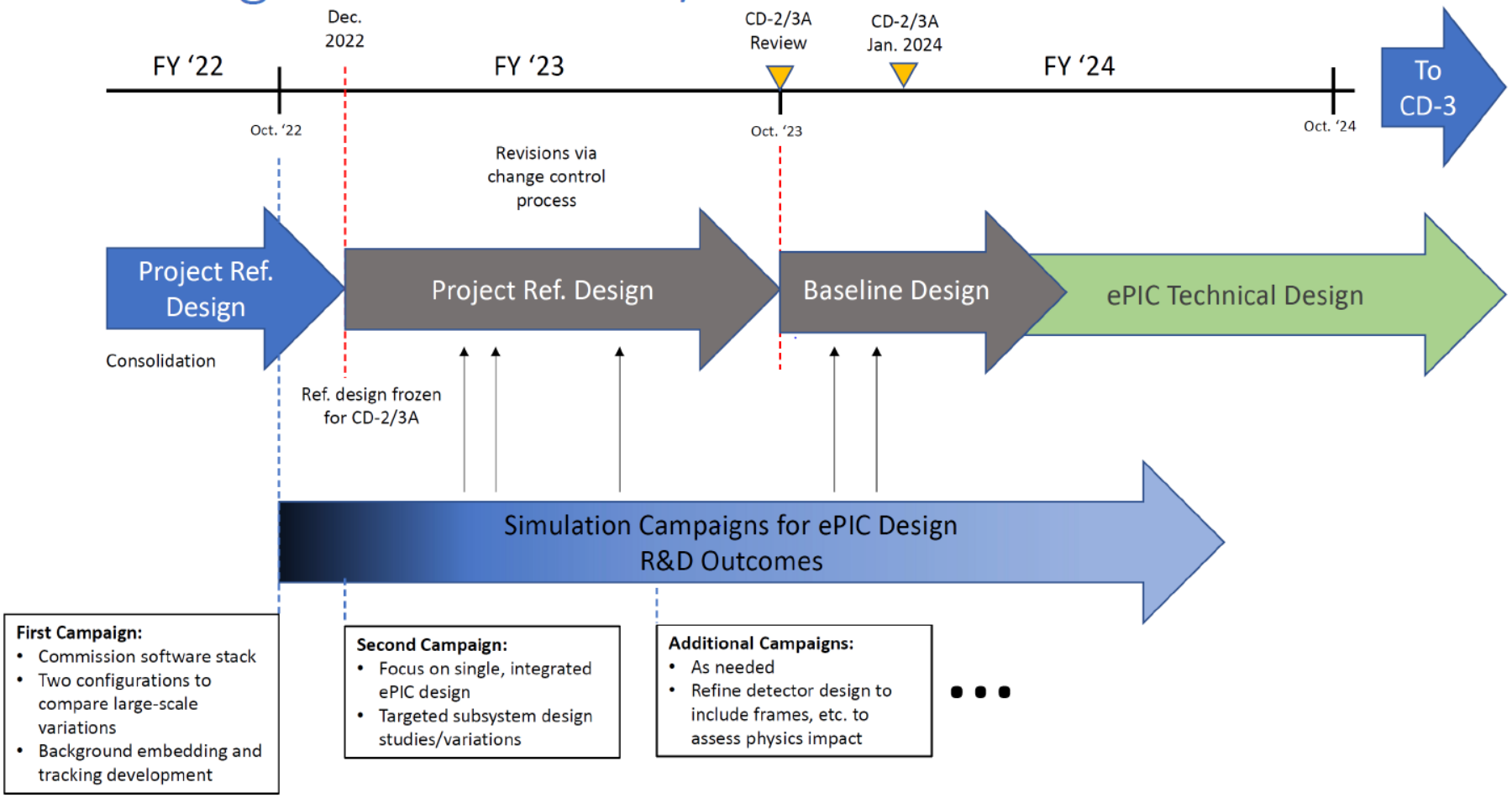
COMING MONTHS

- ***November – December 2022:***
  - **First simulation campaign, detector subsystem review**
  - **December 6-7th : Calorimetry Review**
  - **December (before end of CY): Polarimetry Review**
  - **Incremental Integration/Installation Review (TBD)**
  - **December 9th: one-day DAQ meeting**
    - Workshop on Protocols/Interface/Timing and Clock Distribution (https://indico.bnl.gov/event/17452/)
- ***January – February 2023:***
  - **DOE OPA Status Review**
- ***Additional subsystem reviews early 2023*:**
  - **Tracking, PID, Infrastructure, Magnet Incremental Design and Safety**
- ***April 2023*:**
  - **April 3-4: first RRB meeting**
- ***May 2023*:**
  - **First draft of pre-TDR**
- ***October 2023*:**
  - **Final version of pre-TDR**
  - **DOE OPA CD-2/3A Review**

ePIC CONSOLIDATION and OPTIMIZATION



EPIC Design Towards CD2/3A



ePIC CONSOLIDATION

Two major items: barrel ECal and backward RICH

- **Two options proposed for both these items**

- **GD/I is preparing the review process; key elements:**

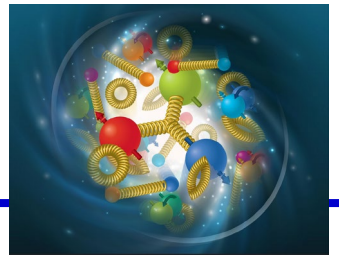
  - **A complete charge is in preparation: it will be distributed within 10 days;**
  - **External experts will complement GD/I convener team for these reviews**
  - **A three-step process:**

    - In December, at GD/I meetings, it is requested to present: information about the work planning about prototypes and test beams, simulation, costing, … NO RESULT REQUESTED in DECEMBER;

    - At a GD/I meeting in the second half of January 2023: update about the ongoing activity with some preliminary results; in particular, information about costing expected as it does not depend on simulations and test beams;

    - In the period second halp of February-first half of March: major review with external experts joining GD/I; matching the whole review charge is expected by then.

The major current effort within ePIC



The simulation campaign

- A dedicated talk to hear about status and planning

- **A relevant message:**
  - There is an urgent need of cooperation from the detector WG for debugging, optimization and development of specialized algorithms
    - Key role by the simulation liaison of each WG!
    - They should attend the simulation meetings and report to their WGs
  - The success of the simulation campaign largely depends on the workforce involvement

Structuring the ePIC Collaboration

- **The final version of the Charter is now available:**

https://indico.bnl.gov/event/17732/contributions/70597/attachments/44428/74975/EPIC_Charter-v1.0.pdf

- ***The key elements as well as the difference respect to the preliminary version circulated in October have been illustrate at the November 10th ePIC general meeting:***
  - ***https://indico.bnl.gov/event/17732/contributions/70597/attachments/44428/74979/EPIC_CC_11102022.pdf***

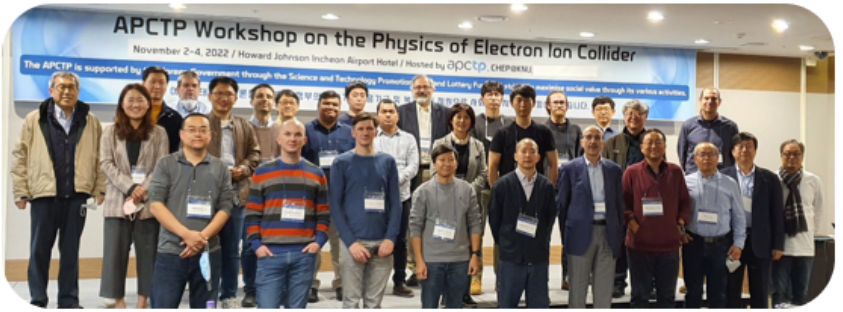
- **The electronic vote by Institution Representatives is being prepared**

Contacts with regional/national communities

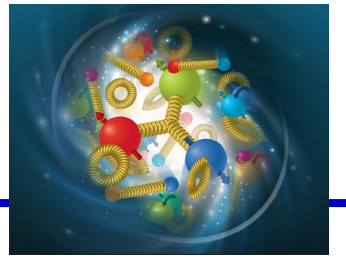
apctp asia pacific center for theoretical physics

APCTP Workshop on the Physics of Electron Ion Collider

- Participation by representatives of Korea, Japan, Taiwan, India, France, and U.S.
- From the U.S., various ePIC and EIC Project representatives attend in-person (e.g. Jim Yeck, Abhay Deshpande, Zein-Eddine Meziani, Ernst Sichtermann, Ming Liu, Or Hen, …)
- Presentation of interest and experience by Asian colleagues in a wide range of technologies:
  - Si assembly and testing
  - GEM Foils and MPDG Manufacturing
  - AC-LGAD development and testing
  - Electronics and readout
  - Calorimetry (including DREAM calorimeter)
  - LAPPD testing
  - …
- Follow up discussions with ePIC leadership foreseen in the coming weeks. Continued meetings, including project, in 2023.



Contacts with regional/national communities



- **On October 17th, 2022, in Prague:**

“ Day with Particle and Astroparticle Research Infrastructure”

(https://indico.cern.ch/event/1139435/)

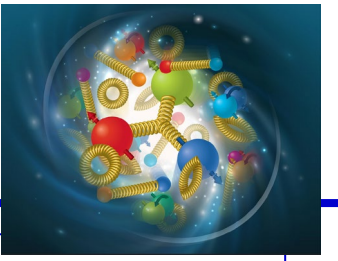
- **Organized by :** *Institute of Physics of the Czech Academy of Sciences, Charles University, Czech Technical University in Prague, Nuclear Physics Institute of the Czech Academy of Sciences, Palacky University Olomouc*

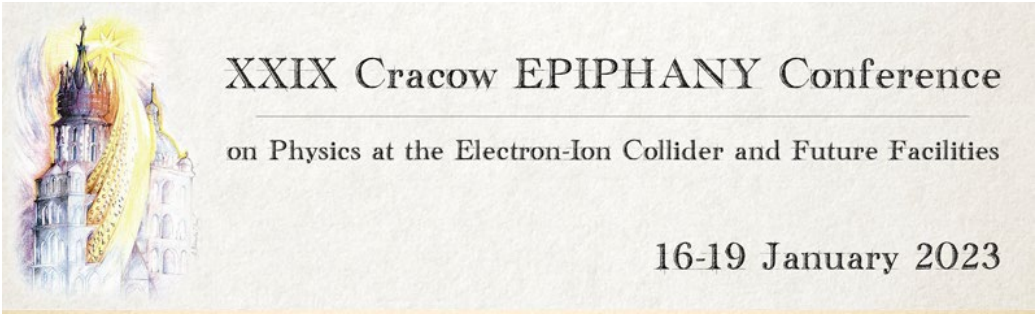
- During morning session, invited speakers are going to introduce to a wider audience the activities and goals of individual laboratories and observatories.
- Afternoon session is devoted to the presentation of LRI's activities within these international projects, and to the synergies between particle and astroparticle infrastructures.

Welcome from director of FZU and presentation of LRI program in the CR	*Michael Prouza*	
Solid21 building, FZU		09:00 - 09:15
CERN	*Eckhard Elsen*	
Solid21 building, FZU		09:15 - 09:35
FERMILAB	*Stefan Soldner-Rembold*	
Solid21 building, FZU		09:35 - 09:55
BNL: Electron Ion Collider and EPIC	*Silvia Dalla Torre*	
Solid21 building, FZU		09:55 - 10:15
LSM	*Jules GASCON*	
Solid21 building, FZU		10:15 - 10:35
Coffee Break		
Solid21 building, FZU		10:35 - 11:00
Auger	*Ralph Richard Engel*	
Solid21 building, FZU		11:00 - 11:20
CTA	*Federico Ferrini*	
Solid21 building, FZU		11:20 - 11:40
FAIR	*Dr Arjan Vink*	
Solid21 building, FZU		11:40 - 12:00
Lunch Break		

- **EIC and ePIC report well received**
- **Several questions showing the need of a deeper advertisement of EIC and ePIC also within Europe**

Contacts with regional/national communities





John Lajoie invited to present ePIC

https://epiphany.ifj.edu.pl/epiphany2023/

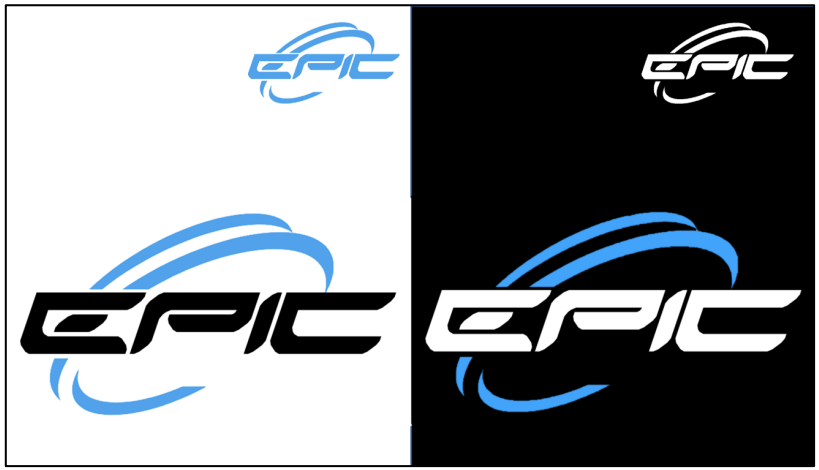
The goal of the present edition of the conference is to review advances in physics at future lepton-hadron experiments. Following the decision on the Electron-Ion Collider localisation and its construction, and developments in the preparation of the polarized lepton and hadron beams the main stress will be put on physics wealth to be studied. Also, the physics programmes of the proposed energy frontier lepton-hadron colliders, LHeC and FCC-eh, will be discussed.

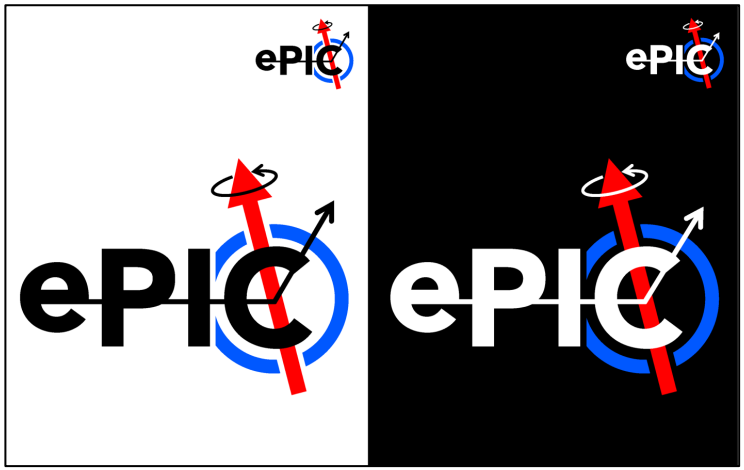
Topics include:

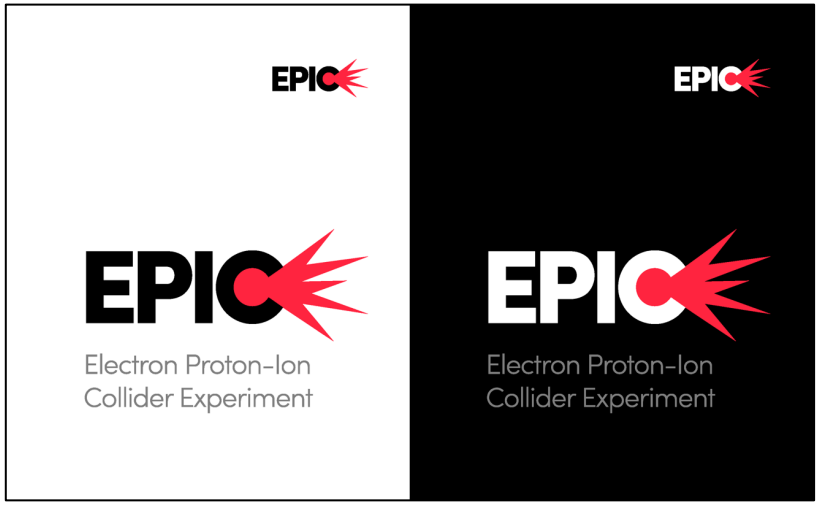
- Spin physics
- Proton tomography
- Proton and nuclear structure
- Small x physics
- Diffraction and saturation
- Exotica and beyond Standard Model physics

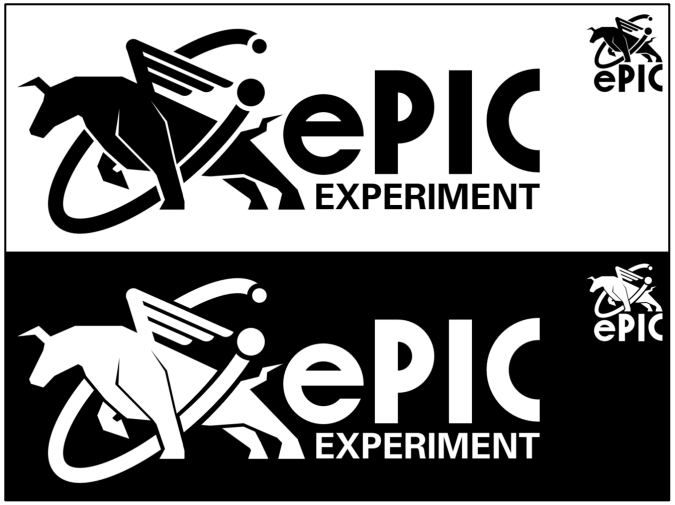
ePIC LOGO SELECTION

- Recall, initially 22 proposals
- 4, selected by you
- Authors were asked to provide full-size and thumbnail versions of their logos, on both a light and dark background; professional graphical support provided (from JLab, thank you !)
- Final step, ready to go: you will receive today via e-mail an invitation to vote for the final selection

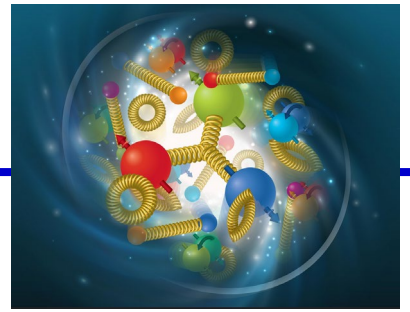








TODAY AGENDA



Short (week of holidays)
An opportunity to keep the Collaboration constantly updated

EPIC General Meeting

Tuesday 22 Nov 2022, 10:30 → 12:45 US/Eastern

Description Connection Information:

10:30 → 12:45 **General Status and Updates**

Conveners: Bernd Surrow (Temple University), John Lajoie (Iowa State University), Or Hen (MIT), Silvia Dalla Torre (INFN, Trieste), Tanja Horn (Cath)

10:30 **SC Updates and Plans (20+10)** 30m

Speaker: Silvia Dalla Torre (INFN, Trieste)

11:00 **simulation campaign update (20+10)** 30m

Speakers: Andrea Bressan (University of Trieste and INFN), Cristiano Fanelli (affiliate@jlab.org;member@jlab.org), Joe Osborn (Brookhaven National Laboratory), Markus Diefenthaler (Jefferson Lab), Sylvester Joosten (Argonne National Laboratory), Wenliang Li (Stony Brook University CFNS), Wouter Deconinck (University of Manitoba), Zhoudunming Tu (BNL)